

**THAT WHICH IS CLAIMED IS:**

1. A switching circuit for switching an output signal (CKS) to one of a plurality of N input clock signals (CK1-CKN) which are delayed relative to one another, in response to a control (CNT), characterized in that it comprises circuit means (31-316, 7) responding to the control (CNT) in order to enable the transmission, on the output signal (CKS), of a new signal (CK(i-1); CKi) of the plurality of input signals which is advanced or delayed relative to a current signal (CKi; CK(i-1)) of the plurality of input signals which is currently transmitted on the output signal (CKS), the circuit means (31-316, 7) enabling the transmission of the new signal (CK(i-1); CKi) before disabling the transmission of the current signal (CKi; CK(i-1)) on the output signal (CKS) so as to prevent the production of false signals during the switching of the output signal from one of the clock signals to another.

2. A switching circuit according to Claim 1, characterized in that the circuit means (31-316, 7) comprise a plurality of N circuit blocks (31-316) each of which receives a respective clock signal (CK1-CK16) of the plurality of N signals and can be selected to supply the respective signal (CK1-CK16) to its own output (EN\_CK1-EN\_CK16) which is operatively connected to the output (CKS) of the switching circuit, the circuit blocks being operatively connected to one another to form a ring and each circuit block generating a disabling signal (K1-K16) to be supplied to the circuit blocks adjacent to it in the ring, the

disabling signal being activated when the circuit block is selected in order to disable the respective outputs EN\_CK1-EN\_CK16) in the adjacent blocks.

3. A switching circuit according to Claim 2, characterized in that the disabling signal (K1-K16) is activated after the output (EN\_CK1-EN\_CK16) of the respective circuit block has been enabled to provide ' the respective local clock signal (CK1-CK16).

4. A switching circuit according to Claim 3, characterized in that it comprises a decoding circuit (6) for decoding control signals (CNT) for the switching circuit, the decoding circuit (6) activating one of N selection signals (S1-S16) for the circuit blocks (31-316), in dependence on a state of the control signals (CNT).

5. A switching circuit according to Claim 4, characterized in that all of the clock signals (CK1-CKN) have the same period T.

6. A switching circuit according to Claim 5, characterized in that the clock signals (CK1-CKN) are delayed equally relative to one another by a fraction  $T/N$  of the period T.

7. A switching circuit according to Claim 6, characterized in that each of the circuit blocks (31-316) comprises first circuit means (FF3, I1, A2, FF5, FF6) for generating a pulse on the disabling signal (K1-K16) as a result of the activation of the respective selection signal (S1-S16).

8. A switching circuit according to Claim 7, characterized in that each of the circuit blocks (31-316) comprises second circuit means (FF3, FF4, A2, O1, I1, A2, O2, A3, FF7) for activating a signal (ENi) for enabling the transmission of the respective local clock signal (CK1-CKN) in response to the activation of the respective selection signal (S1-S16), the enabling signal (ENi) being activated in synchronism with the respective local clock signal (CK1-CKN).

9. A switching circuit according to Claim 8, characterized in that the second circuit means (FF3, FF4, A1, O1, I1, A2, O2, A3, FF7) receive the disabling signals (K1-K16) from the adjacent circuit blocks (31-316) and deactivate the enabling signal (ENi) when one of the disabling signals is activated.

10. A circuit for recovering data in a serial data flow comprising a generator (4) generating a plurality of N clock signals (CK1-CKN) of equal period T which are delayed equally relative to one another by a fraction  $T/N$  of the period T, the generator (4) supplying a switching circuit (3) for switching an output (CKS) to one of the clock signals (CK1-CKN), the output (CKS) being supplied to a phase comparator (1), together with a signal (BK) carrying a flow of data being received, and control means (5) for the switching circuit (3), the control means (5) receiving from the phase comparator (1) signals (+/-) indicative of the phase difference between the output (CKS) of the switching circuit (3) and the flow of data being received (BK) and consequently controlling the

t (3) so as to switch the clock (CK1-CKN) with a smaller delay is characterized in that the switch is provided with any one of the preceding switching circuit according to Claim 1 or 2. The switching circuit (4) is a delay-locked loop circuit according to Claim 1 or 2. The switching circuit (BK) carrying the flow of the clock output (CKS) of the switch is connected to data sampling circuit means of the switching circuit and provides a signal for the sampling.

with any one of the  
circuit according  
tor (4) is a delay-

so as to switch the CKN) with a smaller delay in that the switch is any one of the preceding according to Claim 1 is a delay-locked loop according to Claim 1 carrying the flow of CKN) of the switch a sampling circuit and a switching circuit and the sampling.

add  
AI